

## Remarks

The Examiner rejected claim 44 under section 112 as being indefinite. The Examiner notes that it is unclear what the Applicant is trying to claim with the "cross section" language. The Applicant has amended claim 44 to clarify the scope of the claim. Claim 44 recites that the inner muntin grid element has a longitudinal direction, a plurality of spaced corners and a cross sectional perimeter dimension measured about a cross section viewed normal to the longitudinal direction of the inner muntin grid element. This cross section is shown in the drawings that exemplify this embodiment. For example, Figs. 7-42 show the cross section of the inner muntin grid element as well as showing the width of the outer muntin grid element with the corner notches. The Applicant submits that the language of claim 44 describes the relationship of the inner and outer muntin in a definite manner complying with section 112.

The Examiner rejected claims 23, 26-30, and 32 as being anticipated by Stoakes (4,756,131). The Applicant respectfully traverses the rejections. The Stoakes reference cited by the Examiner discloses mullions that are used to hold separate window units together in an edge-to-edge relationship. The Applicant thus submits that the Stoakes reference does not contain teachings relevant to independent claim 23 and its dependent claims. One of ordinary skill in the art would not reasonably be expected to rely on the Stoakes mullions teachings when designing a muntin grid piece adapted to be used to form a muntin bar grid for a window as recited in independent claim 23. The Examiner has not shown why a person of ordinary skill in the art seeking to solve a problem of improving muntin bars would reasonably be expected or motivated to look in the mullion art. "The combination of elements from non-analogous sources, in a manner that reconstructs the Applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found

in the prior art whereby a person of ordinary skill in the field of the invention would make the combination.” *In re Oetiker*, 24 USPQ 2d 1443 (Fed. Cir. 1992). The Applicant thus submits that independent claim 23 and its dependent claims are patentable over the Stoakes reference.

Further, the Applicant has amended independent claim 23 to specifically recite that the flexible, collapsible outer muntin grid element is capable of being collapsed upon itself and reopened. The Martin reference discloses muntin grid elements that are formed from a styrene plastic. Styrene plastic is not collapsible in the manner that the term collapsible is used in the present application. The Applicant respectfully directs the Examiner’s attention to Applicant’s Fig. 34 where a collapsible outer muntin grid element is disclosed in the collapsed form. The collapsibility of the outer muntin grid element allows the outer muntin grid element to be collapsed and stored and shipped and then reopened when the manufacturer uses the outer muntin grid element. The collapsibility of the outer muntin grid element also allows the outer muntin grid element to collapse and reopen when the glass sheets of a window press against the outer muntin grid element. The glass sheets may press against the outer muntin grid elements during wind, pressure, and temperature changes. The Stoakes reference fails to disclose, teach, or suggest the flexible, collapsible outer muntin grid element recited in independent claim 23. Independent claim 23 and its dependent claims are thus patentable over the Stoakes reference.

The Examiner rejected claims 23-29 and 32 as being anticipated by Baratuci (5,851,609). The Applicant respectfully traverses the rejections. The Baratuci reference cited by the Examiner discloses spacers that are used to space the edges of glass sheets in insulating glass units. The Applicant thus submits the Baratuci reference does not contain teachings relevant to independent claim 23 and its dependent claims. One of ordinary skill in the art would not reasonably be expected to rely on the Baratuci spacer teachings when designing a muntin grid piece adapted to be used to form a muntin bar

grid for a window as recited in independent claim 23. The Examiner has not shown why a person of ordinary skill in the art seeking to solve a problem of improving muntin bars would reasonably be expected or motivated to look in the spacer art. “The combination of elements from non-analogous sources, in a manner that reconstructs the Applicant’s invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination.” *In re Oetiker*, 24 USPQ 2d 1443 (Fed. Cir. 1992). Spacers are components that structurally support the glass while muntins are decorative elements disposed outside or inside the glass. The Applicant thus submits that independent claim 23 and its dependent claims are patentable over the Baratuci reference.

Further, the Baratuci reference fails to disclose, teach, or suggest the outer muntin grid element as recited in claim 23. The Examiner cites Fig. 7 as showing the invention recited in claim 23. In Fig. 7, Baratuci discloses a spacing element (25) that is embedded within a material (24). The material (24) is not collapsible and then capable of being reopened to an open position wherein the outer muntin grid element defines a longitudinal opening. The material (24) of Baratuci is not provided separate from the inner muntin grid element and thus cannot be collapsible and reopenable in the manner recited in claim 23. Baratuci also fails to disclose the elements recited in the claims dependent to claim 23. Independent claim 23 and its dependent claims are thus patentable over the Baratuci reference.

The Examiner rejected claims 33-34 and 36-43 as being anticipated by Baratuci (5,851,609). The Applicant respectfully traverses the rejections. The Applicant again submits that Baratuci discloses a spacer and is not relevant to the claimed muntin bar. Claim 33 recites that the outer muntin grid element is a collapsible and resilient flexible tube having an inner surface and an outer surface with the collapsible tube being capable of being collapsed upon itself

and reopened to a tube form. Claim 39 recites that the outer muntin grid element is in the form of a tube disposed around the inner muntin grid element to hide the inner muntin grid element from view on both sides of the window when the muntin grid piece is installed. Claim 39 also recites that the tube has a sidewall that defines a longitudinal slit that allows the tube to be opened and wrapped around the inner muntin grid element with the slit extending from the inner surface to the outer surface through the sidewall of the tube. The Examiner cites the adhesive film (330, 730) that is applied to the core material as meeting the outer muntin grid element recitations in claims 33 and 39. The Applicant submits that the adhesive (330, 730) of Baratuci is not provided in tube form and cannot be collapsed on itself and reopened back into tube form in the manners recited in claims 33 and 39. The Applicant thus submits that independent claims 33 and 39 and their dependent claims are patentable over the Baratuci reference.

The Examiner rejected claims 23-29, 32-34, and 36-49 as being anticipated by Peterson (6,351,923). The Applicant respectfully traverses the rejections. As set forth above, the Applicant submits that Peterson discloses a spacer and is not relevant to the claimed muntin bar. Further, Peterson does not have the structures recited in the claims. Peterson fails to disclose an outer muntin grid element. The structure cited by the Examiner (64) is a sealant that is applied to the spacer (126). The sealant is not a tube and is not collapsible and reopenable in the manner recited in the claims. The Applicant thus submits that the claims are patentable over the Peterson reference.

The Examiner also rejected claims 24 and 25 under section 103. The Applicant respectfully traverses these rejections. The addition of Donaldson and Baier to the Stoakes disclosure fail to disclose or suggest the outer muntin grid element configuration of the claims.

The Examiner rejected independent claim 39 and dependent claims 42-43 as being anticipated by Martin (3,474,587). In addition, the Examiner

rejected dependent claims 40-41 as being obvious in view of the combination of Martin in view of Baier and Donaldson (6,192,651). The Applicant respectfully traverses the rejections. Independent claim 39 specifically requires the outer muntin grid element to be in the form of a flexible tube disposed around the inner muntin grid element to hide the inner muntin grid element from view on both sides of the window when the muntin grid piece is installed. Claim 39 requires the tube to define a slit that allows the tube to be opened and wrapped around the inner muntin grid element with the slit extending from the inner surface of the tube to the outer surface of the tube. The Martin reference cited by the Examiner discloses an inner muntin grid element (22) in the form of a short connecting pin. Connecting pins 22 are only designed to hold together the outer muntin grid elements (20 and 18) to form the muntin grid of the window. Pins 22 thus do not form inner muntin grid elements. Furthermore, the outer muntin grid elements (18 and 20) of Martin are not in the form of flexible tubes that define slits that allow the tube to be opened and wrapped around the inner muntin grid element. Figure 9 clearly shows that the outer muntin grid elements (18) are solid and do not define slits that allow the outer muntin grid element (18) to be opened and wrapped around the inner muntin grid element. The Examiner's attention is respectfully directed to an exemplary embodiment such as that depicted in Figs. 31A-31C wherein a tube-shaped outer muntin grid element is opened and wrapped around an inner muntin grid element. Applicant's specification includes other embodiments such as that depicted in Fig. 27G. The slits of Applicants invention thus allow the outer muntin element to be opened and wrapped around the inner muntin element so that the outer muntin element does not have to be slid over the inner muntin element as in the prior art reference. In the rejection at paragraph three of the office action, the Examiner does not identify what Martin element meets the "slit" limitation. The Applicant thus submits that Martin does not anticipate independent claim 39 or its dependent claims.

The Applicant amended claims 27 and 42 to clarify that the angled ends are different from the 90 degree ends that are cited by the Examiner.

In view of the foregoing, the Applicant respectfully requests reconsideration of the claims and most earnestly solicits the issuance of a formal notice of allowance for the claims. If any issues remain after this amendment, the undersigned attorney would welcome a telephone call.

Respectfully submitted at Canton, Ohio this 23<sup>rd</sup> day of August, 2004.

Zollinger & Burleson Ltd.



By: Fred H. Zollinger, III

Reg. No. 39,438

P.O. Box 2368  
North Canton, Ohio 44720  
Telephone: (330) 526-0104  
Facsimile: (866) 311-9964  
Attorney Docket: 1663-I-CIP

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence (Amendment D in application serial no. 09/775,074 filed February 1, 2001) is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
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on this 23<sup>rd</sup> day of August, 2004.



Fred H. Zollinger III